

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 28 MAR 2006

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Applicant's or agent's file reference E-3088/05	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2005/051097	International filing date (day/month/year) 10.03.2005	Priority date (day/month/year) 11.03.2004	
International Patent Classification (IPC) or national classification and IPC INV. B65B19/22 B65B59/00			
Applicant G.D SOCIETA' PER AZIONI et all.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 10.01.2006		Date of completion of this report 28.03.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized officer Grentzius, W Telephone No. +31 70 340-3728	



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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

3-17	as originally filed
1, 2	filed with the demand

Claims, Numbers

5(part), 6-23	as originally filed
1-4, 5(part)	filed with the demand

Drawings, Sheets

1/10-10/10	as originally filed
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- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-23
	No: Claims	3,4,7-23
Inventive step (IS)	Yes: Claims	1,2,5,6
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-23
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: US-A-4 144 695 (SERAGNOLI ET AL) 20 March 1979 (1979-03-20)

D2: EP-A-0 873 939 (FOCKE & CO.) 28 October 1998 (1998-10-28)

D3: US-A-4 938 656 (GAMBERINI ET AL) 3 July 1990 (1990-07-03)

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses a multipurpose packing machine in accordance with the preamble of claim 1. In this respect it should be noted, that the description mentions on page 2, line 10, that the input portion according to the present invention is in fact a standard packing machine for producing rigid packets, as disclosed in D1.

The subject-matter of claim 1 therefore differs from this known machine in that the output portion comprises a second packing module for forming second packages comprising at least one first packet.

The problem to be solved by the present invention may therefore be regarded as providing a machine which can also package groups of hinged lid packets.

The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT), because it is customary in the art to group cigarette packets and to package such groups, e.g. by machines as disclosed in D2 or D3.

The machine of claim 1 is therefore merely a combination of two existing machines like the ones disclosed in D1 and D2, working in the normal way. As there is no surprising technical effect resulting from the combination of those machines, such a combination

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would be obvious to the skilled man. The subject matter of claim 1 can therefore not support any inventive step.

Dependent claims 2,5,6 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, see documents D1 and D2 and the corresponding passages cited in the search report.

The combination of the features of dependent claims 3,4,7-23 is neither known from, nor rendered obvious by, the available prior art.

Re Item VIII.

The application does not meet the requirements of Art. 6 PCT, because claims 1 to 4 are not clear and not supported by the description. More precisely, the definition of the packing modules comprising respective input and output wheels is vague and ambiguous, because the relative arrangement and function of those wheels is not defined.

It would appear that in order to achieve the technical effects described, the input and output wheels must be arranged as defined in claims 3 and 4 and connected by transfer stations and feed lines as defined in claims 5 and 7. The independent claim should have included those essential features.

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CIGARETTE PACKING MACHINE

TECHNICAL FIELD

The present invention relates to a multipurpose packing machine for producing rigid packets of cigarettes.

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BACKGROUND ART

In the tobacco industry, various types of rigid packets are produced, for example : packets having a rigid outer package formed by folding a first blank (dispensable) normally defined by a collar of cardboard or similar, and by folding a second blank also made of cardboard or similar and defining an outer package; or packets whose outer package is defined by a first rigid package formed by folding a relative blank of cardboard or similar with or without a respective collar, and by a second rigid package formed by folding a relative blank of cardboard or similar, and housing the first package, which is at least partly removable; or packets, in which a rigid outer package - normally, though not necessarily, opened wallet-fashion and formed by folding a relative blank of cardboard or similar - houses a number of identical or different groups of cigarettes, each having a relative rigid package with or without a relative collar, or houses one or more groups of cigarettes, each of which has a relative rigid package with or without a relative collar, and is associated with one or more objects of a different nature.

Normally, each of the above types of packet is produced on a specially designed packing machine.

EP0873939A1 discloses a packing machine for making cigarette cartons; the packing machine comprises a first folding turret for wrapping a group of cigarette packs in a blank, in particular a cardboard blank, and a second folding turret for over-wrapping the group of cigarette packs in another blank, in particular a paper or film
5 blank.

DISCLOSURE OF INVENTION

It is an object of the present invention to provide a multipurpose packing machine, the layout of which is such as to enable production of any of the types of
10 packet referred to above by way of example, by changing or possibly repositioning certain members, such as packing wheels or, more simply, folding devices, gumming devices, and similar.

According to the present invention, there is provided a packing machine as recited in the attached claims.

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BRIEF DESCRIPTION OF THE DRAWINGS

A number of non-limiting embodiments of the present invention will be described by way of example with reference to the accompanying drawings, in which:

20 Figure 1 shows a schematic view in perspective, partly in block form and with parts removed for clarity, of a preferred embodiment of a packing machine in accordance with the present invention;

Figures 2 to 7 show schematic views in perspective of respective preferred embodiments of a detail in Figure 1;

25 Figures 8 and 9 show, in perspective and in a closed and open position respectively, a first type of packet that can be produced on the Figure 1 packing machine;

Figures 10 and 11 show views in perspective of a variation of the Figure 8 and 9 packet in a closed and open position respectively;

30 Figures 12 and 13 show exploded views of respective embodiments of the Figure 8 and 9 packet;

Figures 14 and 15 show, in perspective and in a closed and open position

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CLAIMS

1) A multipurpose packing machine for producing rigid packets of cigarettes and comprising:

an input portion (2), which comprises at least a first packing module (26) for forming groups (5) of cigarettes, for wrapping sheets of packing material (11) about the groups (5) of cigarettes to form packed groups (13) of cigarettes, and for forming a succession of first packages (31) about the packed groups (13) of cigarettes to produce a succession of first packets (30) of cigarettes; and

an output portion (3);

characterized in that the output portion (3) comprises at least a second packing module (33; 46; 53; 62; 70) similar to the first packing module (26) and for forming a succession of second packets (35; 49; 57) of cigarettes, each having a second package (37; 50; 58) housing at least one respective first packet (30) of cigarettes.

2) A machine as claimed in Claim 1, wherein said first and said second packing module (26, 33; 26, 46; 26, 53; 26, 62; 26, 70) each comprise a respective input wheel (19; 38) and a respective output wheel (23; 39) having a first and a second axis (20, 27; 40, 41) respectively; the input wheel (19, 38) and the output wheel (23, 39) rotating in steps about the relative said first and second axis (20, 27; 40, 41).

3) A machine as claimed in Claim 2, wherein, in each said first and second packing module (26, 33; 26, 46; 26, 53; 26, 62; 26, 70), said first and second axis (20, 27; 40, 41) are crosswise to each other.

4) A machine as claimed in Claim 2 or 3, wherein, in each said first and second packing module (26, 33; 26, 46; 26, 53; 26, 62; 26, 70), the first axis (20; 40) is a vertical axis, and the second axis (27; 41) is a horizontal axis.

5) A machine as claimed in any one of Claims 2 to 4, and comprising a number of feed lines (25, 29, 43; 25, 29, 52; 25, 29, 61; 25, 29, 65; 25, 29, 72) for relative blanks (22, 28, 34; 22, 28, 48; 22, 28, 56; 22, 28, 63; 22, 28, 71); the first packing module (26) comprising a first transfer station (24) connecting the relative input wheel (19) to the relative output wheel (23), and a first said feed line (25) for feeding a succession of first said blanks (22) at least partly defining relative said first